MARKED-UP VERSION OF ALL PENDING CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Previously Presented) A system for analyzing sheet resistivity of a silicide layer on a wafer and for controlling rapid thermal annealing (RTA) of the silicide layer comprising:

one or more RTA components that perform RTA on the silicide layer;

one or more sheet resistivity analyzing components that analyze the sheet resistivity of one or more portions of the silicide layer upon which the RTA components can perform RTA; and

a feedback generator that accepts sheet resistivity data from the analyzing component and produces feedback information operable to control the one or more RTA components.

2.   (Cancelled)

3.   (Previously Presented) The system of claim 1, wherein the silicide is one of TiSi$_2$ and NiSi.

4.   (Previously Presented) The system of claim 1, the feedback generator is operable to maintain and/or change the heating time for one or more RTA components.

5.   (Previously Presented) The system of claim 1, the feedback generator is operable to maintain and/or change the heating temperature for one or more RTA components.

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6.   (Previously Presented) The system of claim 1, the feedback generator is operable to maintain and/or change the heating time and the heating temperature for one or more RTA components.

7.   (Previously Presented) The system of claim 1, further comprising a data store that stores a first information associated with monitoring sheet resistivity and controlling RTA.

8.   (Previously Presented) The system of claim 7, the first information includes at least one of sheet resistivity measurements, the feedback information, RTA time parameters, RTA heat parameters, layer composition, wafer size, wafer composition, wafer supplier, processing stage data, RTA chamber data and sheet resistivity chamber data.

9.   (Previously Presented) The system of claim 7, further comprising a monitoring application that analyzes the feedback information and examines the first information stored in the data store and produces reporting information associated with at least one of the RTA components, the sheet resistivity analyzing components, the feedback generator and the data store.

10.   (Previously Presented) The system of claim 9, the monitoring application schedules maintenance for at least one of the RTA components, the sheet resistivity analyzing components, the feedback generator and the data store.

11.   (Previously Presented) The system of claim 1, the one or more RTA components and the one or more sheet resistivity components are located in the same physical apparatus.

12.   (Previously Presented) The system of claim 11, the feedback generator is operable to maintain and/or change the heating time for one or more RTA components.

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13.   (Previously Presented) The system of claim 1, the feedback generator is operable to maintain and/or change the heating temperature for one or more RTA components.

14.   (Previously Presented) The system of claim 11, the feedback generator is operable to maintain and/or change the heating time and the heating temperature for one or more RTA components.

15.   (Previously Presented) The system of claim 11, further comprising a data store that stores first information associated with monitoring sheet resistivity and controlling RTA.

16.   (Previously Presented) The system of claim 15, the first information includes at least one of sheet resistivity measurements, the feedback information, RTA time parameters, RTA heat parameters, layer composition, wafer size, wafer composition, wafer supplier, processing stage data, RTA chamber data and sheet resistivity chamber data.

17.   (Previously Presented) The system of claim 15, further comprising a monitoring application that analyzes the feedback information and examines the first information stored in the data store and produces reporting information associated with at least one of the RTA components, the sheet resistivity analyzing components, the feedback generator and the data store.

18.   (Previously Presented) The system of claim 17, the monitoring application schedules maintenance for at least one of the RTA components, the sheet resistivity analyzing components, the feedback generator and the data store.

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19.   (Previously Presented) The system of claim 1, the wafer is mapped into a plurality of grid blocks, the one or more sheet resistivity analysis components make a determination of sheet resistivity at a grid block, and the one or more RTA components are selectively controllable to perform RTA at a grid block.

20.   (Previously Presented) A method for regulating layer formation, comprising:

defining a layer as one or more portions;

performing rapid thermal annealing on one or more of the portions;

measuring sheet resistivity in one or more of the portions;

analyzing the sheet resistivity measurements to determine the acceptability of the sheet resistivity at one or more of the portions;

generating feedback information, based at least in part on the sheet resistivity measurements, the feedback information operable to control one or more RTA components, the RTA components corresponding to a respective portion; and

controlling one or more RTA components to regulate RTA at one or more portion;

storing at least one of the sheet resistivity measurements, the feedback information, RTA time parameters, RTA heat parameters, layer composition, wafer size, wafer composition, wafer supplier, processing stage data, RTA chamber data and sheet resistivity chamber data in a data store; and

monitoring at least one of the sheet resistivity measurements, the feedback information, RTA time parameters, RTA heat parameters, layer composition, wafer size, wafer composition, wafer supplier, processing stage data, RTA chamber data and sheet resistivity chamber data and producing at least one of a productivity report, an error report and a maintenance schedule.

21.   (Cancelled)

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22.   (Previously Presented) The method of claim 20, further comprising performing machine learning based, at least in part, on data stored in the data store, the machine learning capable of adapting one or more parameters associated with performing RTA on one or more of the portions.

23.   (Cancelled)

24.   (Previously Presented) A system for regulating layer formation on a silicide wafer, comprising:

sensing means for sensing electrical properties of a silicide layer;

rapid thermal processing means for heating a silicide layer; and

controlling means for selectively controlling the rapid thermal processing means so as to regulate silicide layer formation.

25.   (Currently Amended) A data packet transmittable between two or more processses, the data packet containing information related to sheet resistivity measurements, and feedback information operable to control one or more RTA components.

26.   (Cancelled)

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